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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/159,104	09/23/1998	FUMIO DENDA	981091	4736

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ARMSTRONG, WESTERMAN & HATTORI, LLP  
1725 K STREET, NW.  
SUITE 1000  
WASHINGTON, DC 20006

EXAMINER

PENDLETON, BRIAN T

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/159,104

Applicant(s)

DENDA, FUMIO

Examiner

Brian T. Pendleton

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 1998.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Beller.

Beller discloses a speech-training device comprising microphone 1 for receiving speech signals and high pass filter 4 for attenuating a predetermined frequency region. Per claim 2, the speech signal is listened to continuously. As to claim 3, the high pass filter 4 has a cutoff range of 6 kHz to 8 kHz, which is between 1.8 kHz and 7 kHz. Regarding claim 4, the high pass filter 5 is adjustable and the abstract teaches a processing time pattern.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merzenich et al in view of Kato et al. Merzenich discloses a method of enhancing the recognition of speech in individuals. A portion of this method entails reproducing speech segments with prolonged consonants and over time shortening the consonant

Art Unit: 2644

sounds so that a trainee learns to identify those consonants (see columns 7 and 8). Thus, it was taught to play processed and non-processed sound to increase an individual's identification of certain language sounds. Merzenich also suggested that the consonants are emphasized. Kato et al disclose a system for correcting a sound field in a narrow space. The purpose of the invention was to acquire a natural localization of input stereo signals. It would have been obvious to one of ordinary skill in the art at the time of invention to use the system of Kato et al in Merzenich since the human body is concerned with binaural listening. Kato et al disclose attenuators 17, 18, 19, and 20 which superimpose an attenuated signal of one channel with the original signal of the other channel in figure 1. Claims 5, 10 and 11 are met. Per claims 6 and 12, the signal processing is fixed. As to claims 7 and 13, Merzenich et al teaches various processing timings.

Claims 8, 9 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merzenich et al in view of Kunugi et al. Merzenich et al disclose a method of enhancing the recognition of speech in individuals. As discussed above, it was taught in Merzenich et al to reproduce processed and non-processed sound. Therefore, it would have been obvious to alternate between the two sounds for the purpose of training. Kunugi et al disclosed a sound field correction circuit containing a phase reverse process (inverters 7-15 and 7-16). It would have been obvious to one of ordinary skill in the art at the time of invention to use the circuitry of Kunugi et al in the invention of Merzenich et al since it was taught to use phase reversal methods to enhance the perception of sound and correct distortion in the reproduced signal. The

Art Unit: 2644

benefits of using Kunugi's teaching with the technique laid forth by Merzenich would have been to improve the learning capabilities of the individual by reproducing an enhanced sound. Per claims 9 and 15, Merzenich et al teaches various processing timings.

**Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Brian Tyrone Pendleton  
December 23, 2002



FORESTER W. ISEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600